

REMARKS

Status Summary

The Office Action dated December 8, 2006 has been noted and its contents carefully studied. Claims 15-33 were previously pending in the application. By this Amendment, Claims 15, 16, and 29 have been amended to better clarify and more particularly claim the present invention and new Claims 34-37 have been added. No new matter has been added. Reconsideration of the application as amended and based on the remarks set forth hereinbelow is respectfully requested.

Claim Rejections - 35 U.S.C. § 112

Claims 15-33 presently stand rejected by the Examiner under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner states that the disclosure "a hollow-walled housing forming a hollow chamber therein surrounding said storage compartment" is not supported by the drawings. Particularly, the Examiner states that Figures 1 and 2 show the hollow-walled housing 2 which does not surround (enclose all sides) the storage compartment 9. Rather, the Examiner states, the hollow-walled housing 2 encloses only three sides of storage compartment 9 and the fourth side is a door 3 and there is no sign whether the door is hollow and part of the hollow-walled housing 2.

Independent Claims 15 and 29 have been amended to further recite an exterior door and that the hollow-walled housing and the door surround the storage compartment. Accordingly, applicants submit that the 35 U.S.C. § 112 rejections have been overcome by the amendments set forth herein. As such, Applicants respectfully request that the rejections of Claims 15-33 under 35 U.S.C. § 112, first paragraph be withdrawn and the claims allowed at this time.

Claim Rejections - 35 U.S.C. § 102

Claims 15, 16, 18 and 28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by GB389535A to James (hereinafter "James"). These rejections are respectfully traversed.

Preliminarily, it is noted that it is well settled that for a cited reference to qualify as prior art under 35 U.S.C. § 102, each element of the claimed invention must be disclosed within the reference. See Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81 (Fed. Cir. 1986) (stating that "[I]t is axiomatic that for prior art to anticipate under 102 it has to meet every element of the claimed invention"). Accordingly, it is respectfully submitted that James does not disclose every element of Claims 15, 16, 18 and 28 and therefore cannot anticipate these claims under 35 U.S.C. § 102(b).

By way of background, the present invention relates to a refrigerating device comprising a hollow-walled housing surrounding a storage compartment and comprising a vacuum pump which is connected to a hollow chamber of the housing via a suction line. While it is known to manufacture refrigerating devices with hollow-walled housings which can be evacuated (for improving the thermal insulation of the refrigerator interior), these prior art housings are typically expensive to manufacture and very costly (e.g., hermetically sealed systems that have extreme requirements with regard to vacuum tightness), or require a pump fixedly connected to the housing or require an absorption system to maintain the vacuum (e.g., actively pumped systems).

The refrigerating device according to the present invention combines the advantages of an evacuable storage compartment with the advantages of an actively pumped refrigerating device. Since according to the invention, the same vacuum pump is responsible for generating a vacuum both in the exterior hollow-walled housing and in the storage compartment, a second vacuum pump can be dispensed with. As a result, the manufacturing costs for the refrigerating device and also its operating costs are reduced because only one vacuum pump (which is an energy consumer) is provided. Finally, as a result of using only one pump and having the evacuable hollow-walled housing as the

exterior housing, less space is required so that larger storage space capacities are available in the interior of the refrigerating device.

Independent Claim 15 has been amended herein to better clarify and more particularly claim the present invention. Specifically, Claim 15 now recites a refrigerating device, comprising: an exterior door; at least one storage compartment; an exterior hollow-walled housing forming a hollow chamber therein, said hollow-walled housing and said door surrounding said storage compartment; and a vacuum pump connected via a suction line to both said storage compartment and said hollow chamber.

James discloses a heat-insulated storage chamber particularly for preserving foodstuffs. Referring to Figures 9-11, James discloses an inner storage chamber 33 formed by an inner wall 34 and provided with an airtight door 34a. Around the wall 34 is an inner space 35 formed by a shell 36. Surrounding the shell 36 and spaced therefrom is an outer casing 37 (hollow-walled housing) and the space between the shell 36 and outer casing 37 is filled with a non-conducting filling 38. Pump connections 42 and 43 open into the storage chamber 33 and the inner space 35 respectively, the connections leading through pipes 42a and 43a to a common pump connection 44 of a pump or exhauster driven by an electric motor 45.

Applicants respectfully submit that James does not teach or suggest all of the elements recited by amended independent Claim 15. Particularly, James does not teach or suggest, among other things, a vacuum pump connected via a suction line to both a storage compartment and a hollow chamber formed by an exterior hollow-walled housing. Conversely, James teaches pump connections 42 and 43 opening into a storage chamber 33 and an inner space 35 respectively. The exterior hollow-walled housing formed between shell 36 and outer casing 37 is filled with a non-conducting filling 38 and there is no teaching or disclosure of connection of a pump or exhauster to this housing, and Applicants respectfully submit that such an arrangement would obviate the functionality intended in James.

For the above reasons, Applicants respectfully submit that James does not teach or suggest all of the elements recited by amended independent Claim 15 and therefore

Claim 15 and dependent Claims 16, 18 and 28 (which recite additional patentable subject matter) are not anticipated by the cited reference. Applicants therefore respectfully request that the rejection of Claims 15, 16, 18 and 28 under 35 U.S.C. § 102(b) be withdrawn and the claims allowed at this time.

Claim Rejections - 35 U.S.C. § 103

Claims 17, 19-21, 24-27, 29-30 and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over James in view of U.S. Patent No. 6,090,422 to Taragan et al. (hereinafter "Taragan"). These rejections are respectfully traversed.

Preliminarily, it is noted that in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation either in the reference itself or the knowledge generally available to one of ordinary skill in the art, to modify the reference. See MPEP §2143. Second, there must be a reasonable expectation of success. Id. Third, the prior art reference must teach or suggest all the claimed elements. Id. In view of all of the factual information, a determination must then be made as to whether the claimed subject matter as a whole would have been obvious at the time to that person. See MPEP §2142.

As described above, independent Claim 15 now recites a refrigerating device, comprising: an exterior door; at least one storage compartment; an exterior hollow-walled housing forming a hollow chamber therein, said hollow-walled housing and said door surrounding said storage compartment; and a vacuum pump connected via a suction line to both said storage compartment and said hollow chamber.

Independent Claim 29 has additionally been amended herein to better clarify and more particularly claim the present invention. Specifically, Claim 29 now recites a refrigerating device, comprising: an exterior door; at least one storage compartment; at least one non-evacutable storage chamber; an exterior hollow-walled housing forming a hollow chamber therein, said hollow-walled housing and said door forming an interior space surrounding said storage compartment and a non-evacutable storage chamber; a vacuum pump connected via a suction line to both said storage compartment and said

hollow chamber; a switching valve coupled to said suction line for selective connection of said pump to at least one of said storage compartment and said hollow chamber; at least one pressure sensor arranged on the suction side of said pump; and a control circuit coupled to said pressure sensor for controlling said pump, said control circuit controlling said selective connection of said switching valve in response to said pressure sensor.

As described above, James discloses pump connections 42 and 43 opening into a storage chamber 33 and an inner space 35 (formed between an inner wall 34 and a shell 36) respectively, the connections leading through pipes 42a and 43a to a common pump connection 44 of a pump or exhauster driven by an electric motor 45. An outer casing 37 is also provided and the space between the shell 36 and outer casing 37 is filled with a non-conducting filling 38. There is no disclosure in James of a vacuum pump connected via a suction line to both a storage compartment and a hollow chamber formed by an exterior hollow-walled housing.

Taragan fails to overcome the shortcomings of James. Taragan is directed to a refrigerator 10 including a vacuum cabinet 20 which includes a vacuum compartment 42 and an open top drawer 34 in the vacuum compartment. When the refrigerator door is closed, a rotary spool 75 of the air control valve 70 is moved to a position to recirculate air from the vacuum compartment through the vacuum pump 65 back into the vacuum compartment so as to pre-chill the contents of the vacuum compartment. There is no disclosure in Taragan of a vacuum pump connected via a suction line to both a storage compartment and a hollow chamber formed by a hollow-walled housing. In particular, there is no disclosure in Taragan of a vacuum pump connected to anything but the internal vacuum storage compartment.

Applicants respectfully submit that there is no teaching or suggestion in James, even if combined with the teachings of Taragan, of the elements recited by amended independent Claims 15 and 29. Particularly, there is no teaching or suggestion of, among other things, a vacuum pump connected via a suction line to both a storage compartment and a hollow chamber formed by an exterior hollow-walled housing.

For the above reasons, Applicants respectfully submit that James and Taragan, either alone or in combination, do not teach or suggest all of the elements recited by amended independent Claims 15 and 29 and therefore these claims and the claims that depend therefrom (which recite additional patentable subject matter) are not obvious in view of the cited references. Applicants therefore respectfully request that the rejection of Claims 17, 19-21, 24-27, 29-30 and 33 under 35 U.S.C. § 103(a) be withdrawn and the claims allowed at this time.

Allowable Subject Matter

Applicants appreciate and acknowledge the indication by the Examiner that Claims 22-23 and 31-32 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, subject to removal of the § 112 problem as discussed above. New Claims 34-37 have now been added which represent original dependent Claims 22-23 and 31-32, respectively, rewritten in independent form so as to include the features of the base claims and any intervening claims (including removal of the § 112 problem as discussed above). Applicants respectfully submit that new Claims 34-37 are now allowable.

CONCLUSION

In view of the above, entry of the present Amendment and allowance of Claims 15-37 are respectfully requested. If the Examiner has any questions regarding this Amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,



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